

## TBD02 – B2.1-2.4 IB Questions

Name \_\_\_\_\_

1. The structures of the amino acids cysteine and serine are shown in Table 20 of the Data Booklet. They can react with each other to form a dipeptide.

(a) State the type of reaction occurring when amino acids react together and identify the other product of the reaction.

(2)

(b) Draw the structures of the **two** possible dipeptides formed in the reaction between one molecule of each of cysteine and serine.

(2)

(c) Six tripeptides can be formed by reacting together one molecule of each of the amino acids arginine, histidine and leucine. Predict the primary structures of these six tripeptides using the symbols shown in Table 20 of the Data Booklet to represent the amino acids.

(3)

(Total 7 marks)

2. When many amino acid molecules react together a protein is formed. These proteins have primary, secondary and tertiary structures.

(i) State the type of intermolecular force responsible for maintaining the secondary structure.

(1)

(ii) State **two** other ways in which the tertiary structure of the protein is maintained.

(2)

(Total 3 marks)